

REMARKS

Claims 1-91 currently remain in the application. Claims 1, 7, 11, 12, 23, 25, 41, 49, 60, 64, 69, 73, 75, 83, 87 and 88 have been amended. Claims 92-101 have been added. Applicant believes the new claim amendments do not add new matter.

Claim 92 is objected to claim 9 written in independent form. Claim 93 is objected to claim 27 written in independent form. Claim 94 is objected to claim 43 written in independent form. Claim 95 is a generic claim of objected to claims 44, 53 and 79 written in independent form. Claim 97 is objected to claim 86 written in independent form. Claim 98 is objected to claim 88 written in independent form. Claim 99 is objected to claim 89 written in independent form. Claim 100 is objected to claim 22 written in independent form.

Claim Objections

The objections cited by the Examiner have been corrected. In particular, misspelling of deflection as defection has been correct in claims 11, 12 and 88 and a spacing error between claims 85 and 86 has been corrected.

Rejections under 35 U.S.C. § 112

Claims 7, 25, 64, 73 and 87 have been amended to correct typographical errors and the rejection is believed overcome thereby. For the purposes of clarification, claim 25 has been amended as "wherein an initial voltage applied between the at least two electrodes is less than the voltage required to actuate the electroactive polymer from the first position to the second position." As described with respect to FIG. 4 in the specification, the electroactive polymer may be pre-conditioned with an initial voltage, which is less than the voltage required to actuate the electroactive polymer from the first position to the second position. Thus, applicant believes the rejection is overcome thereby.

Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103

The Examiner rejected claims 1-7, 11 and 13-17 under 35 U.S.C. 102(b) as being anticipated by Murayama et al. (US 3,903,733).

The Examiner rejected claims 1, 4-8, 11 and 13-17 under 35 U.S.C. 102(b) as being anticipated by Ohigashi et al. (US 3,940,637).

The Examiner rejected claims 1, 20, 23, 24, 26, 30, 31-33 under 35 U.S.C. 102(b) as being anticipated by Scheinbeim et al. (US 5,369,995).

The Examiner rejected claims 83-85 and 91 under 35 U.S.C. 102(b) as being anticipated by Porat et al. (US 6,140,740).

The Examiner rejected claims 12, 41, 42, 45 and 48 under 35 U.S.C. 103(a) as being unpatentable over Murayama et al. (US 3,903,733) in view of Ohata et al. (JP2-1662214).

The Examiner rejected claims 49-52 and 48 under 35 U.S.C. 103(a) as being unpatentable over Gasteb et al. (US 4,870,868) in view of Conrey et al (US 4,257,594).

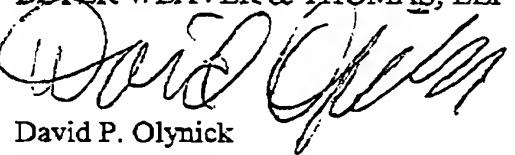
The Examiner rejected claims 60-62, 65-69, 74-78 and 80-82 under 35 U.S.C. 103(a) as being unpatentable over Gasteb et al. (US 4,870,868) in view of Conrey et al (US 4,257,594).

The Examiner rejected claims 21 under 35 U.S.C. 103(a) as being unpatentable over Murayama et al. (US 3,903,733) in view of Conrey et al (US 4,257,594).

Claims 1-91 have been modified to recite the limitation that "the electroactive polymer has an elastic modulus below about 100 MPa." The primary references cited by the Examiner, such as Murayama et al., Ohigashi et al. (US 3,940,637), Scheinbeim et al. (US 5,369,995), Porat et al. (US 6,140,740), Gasteb et al. (US 4,870,868) describe the use of piezoelectric ceramic materials. Piezoelectric ceramics are rigid solids with an elastic modulus typically over 1 GPa. For instance, Porat describes that the piezoelectric layer that may be made of PVDF, which is preferably a poled PVDF sheet, or a flexible piezoceramic (Col. 5, 14-19). In Gasteb et al., a poled PVDF is also described. Gasteb describes the poled PDVF as being subjected to an intense electric field so that a crystalline form (hard, high modulus) of the PVDF dominates (Col. 3, 43-65). In contrast, polymers of amended claim 1 are compliant and have an elastic modulus under 100 MPa, and are highly different materials well outside the scope of rigid piezoelectric materials. Thus, for at least these reasons, Murayama et al., Ohigashi et al., Scheinbeim et al., Porat et al., Gasteb et al., Conrey, et al and Ohata can't be said to anticipate or render obvious claims 1-91.

Claims 92-100 incorporate limitations of objected to claims deemed allowable by the Examiner over the prior art in an independent format.

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP

David P. Olynick
Reg. No.: 48,615

P.O. Box 778
Berkeley, CA 94704-0778
510-843-6200

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